

**Status of The Department of Housing and Urban Development s**  
**Year 2000 Efforts:**  
**Quarterly Progress Report for May 1999**

- I. **Overall Progress.** Provide a report of the status of the agency efforts to address the year 2000 problem, which includes an agency-wide status of the total number of mission-critical systems.

**RESPONSE:** HUD has based its progress reporting on quarterly goals for certification that the Department established in February 1997. These goals were formulated on the premise that because HUD was beginning early enough, had the necessary levels of skilled personnel and resources, and had a plan of sufficient scope and detail, that all of its systems would be made compliant well in advance of the next century. That is, renovation would be complete by September 30, 1998; certification by January 31, 1999; and implementation by March 31, 1999.

True to this plan, on **March 31, 1999, HUD finished 100% of the Year 2000 implementation work on its entire systems inventory - both mission-critical and non-mission-critical systems.**

This achievement not only fulfills the final milestone in the Office of Management and Budget (OMB) schedule for the compliance of mission-critical systems, it surpasses it, in that HUD's non-mission-critical systems have met this milestone as well. **All 174 HUD systems, both mission-critical and non-mission-critical, have been certified Year 2000 compliant, and are now implemented into a compliant production environment.** (Refer to the charts in the response to questions II.a., b., and c. for further evidence of HUD's achievement.)

### Compliance Status of Mission-Critical Systems

<b>*Total Number of Mission-Critical Systems</b>	<b>Number Compliant</b>	<b>Number To Be Replaced</b>	<b>Number To Be Repaired</b>	<b>Number To Be Retired</b>
57	57	0	0	0

\*For this table, the four right-hand columns ( Number Compliant, Number to be Replaced, Number to be Repaired, and Number to be Retired ) must add up to the left-hand column ( Total Number of Mission-Critical Systems ). Over time, as systems are implemented, the Number to be Repaired and Number to be Replaced will decline, while the Number Compliant will increase by the same amounts. Ultimately, the Total Number of Mission-Critical Systems will be equal to Number Compliant. Similarly, the Number to be Retired will also decline as systems are actually retired. As this occurs, the Total Number of Mission-Critical systems will also decline, in order to accurately reflect the total number of mission-critical systems left. Although the Total Number of Mission-Critical Systems should be fairly stable at this time, [HUD will] adjust this number, as well as the number in the relevant column on the right, as necessary, in order to reflect the identification of new systems or determinations that systems are not mission-critical. Any significant changes to the Total Number of Systems [will] be explained in a footnote.

In early March, it was determined that HUD needed to invoke contingency plans for two applications, causing the applications to be reclassified under the disposition To Be Renovated. These two applications completed renovation, certification, and implementation as of March 31, 1999. As a result of the disposition change, the Total Number of Mission-Critical Systems and the Number Compliant in the above chart have risen since the February 1999 Quarterly report.

**II. Progress of Systems Under Repair. Provide a report of the status of agency efforts to address the year 2000 problem, which includes the status of mission-critical systems under repair.**

- a. In the first row, indicate the dates your agency has set for completing each phase. In each report, restate these dates and indicate if there has been a change. In the second row, under Total Number of Systems, indicate the baseline number of mission-critical systems that *have been or will be* repaired. Footnote and explain any changes to this number. Also in the second row, present the number of mission-critical systems that have completed each phase of assessment, renovation, validation, and implementation.

**RESPONSE:** *see next page.*

### **Status of Mission-Critical Systems Being Repaired**

	Total Number of Mission-Critical Systems Being Repaired	Assessment	Renovation	Certification (Validation)	Implementation
<b>Milestones</b>		June 1997 3 <sup>rd</sup> Qtr FY 1997	Sept. 30, 1998 4 <sup>th</sup> Qtr FY 1998	Jan. 31, 1999 2 <sup>nd</sup> Qtr FY 1999	March 31, 1999 2 <sup>nd</sup> Qtr FY 1999
<b>Current Number Complete</b>	43	43	43	43	43

As revealed in the OMB chart above, **100 percent** of HUD's mission-critical systems with the disposition "To Be Renovated" have been implemented into a Year 2000 compliant production environment. <sup>\*\*</sup> This was accomplished by the OMB deadline of March 31, 1999.

In early March, it was determined that HUD needed to invoke contingency plans for two applications, causing the applications to be reclassified under the disposition To Be Renovated. These two applications completed renovation, certification, and implementation as of March 31, 1999. As a result of the disposition change, the Total Number of Mission-Critical Systems Being Repaired has risen since the February 1999 Quarterly report.

**b. Provide a description of progress in fixing or replacing mission-critical systems.**

**RESPONSE:** Many of HUD's largest and most complex systems are also mission-critical systems. In keeping with common industry practice, these systems underwent renovation and certification in phases. A phase is defined as a clearly identified, self-contained function, capable of being renovated and tested independently from the rest of the application. Using the phased approach, the entire system was counted as having completed a milestone (such as renovation) only when *every* phase of the system had successfully completed the milestone, even if a majority of phases were finished.

<sup>\*\*</sup>

The HUD web site identifies an application that will not be implemented until June 1999. While this may appear inconsistent with our statistical reporting, it should not be regarded as such. The application is a small, DOS-based program that simply performs interest calculations for a reverse mortgage; a job aide to be used by our lenders in place of their calculators, if they so choose. The program is so small, in fact, that it was never registered as an application, nor counted in the HUD inventory of systems. Although the program is closely aligned with a mission-critical application (Home Equity Conversion Mortgages, HECM, system code F12), and is maintained by the HECM application development team, it is not, nor should it be considered, either a *part* of HECM, or a mission-critical application itself. The original application has been renovated and certified compliant. Implementation for the program consists of loading the software on an accessible site and advising the user community via mortgagee letter that a new version of the software is available from that site for downloading. The HUD business partner is then responsible for retrieving the executable code and establishing it on their platform. In this case, before the mortgagee letter was approved for the renovated DOS-based product, HUD decided to port the application to Windows. HUD expects to send the mortgagee letter for the Windows version in June 1999.

The table below demonstrates the progress made toward completion of ten large, mission-critical systems being renovated and certified by phases. **All ten systems were implemented into a Year 2000 compliant production environment by February 14, 1999**, six weeks ahead of the OMB deadline.

**Progress on Large Mission-Critical Systems Being Renovated and Certified by Phases**

System Code	System Name & Acronym	Lines of Code	Total Phases	Renovation	Certification*	Implementation
A43I	Single Family Insurance System (SFIS)	1,158,617	8	Cmpl	<i>Certified: 11/6/98</i>	Completed: 12/13/98
A43C	Single Family Insurance System -Claims Subsystem (Claims)	457,957	16	Cmpl	<i>Certified: 1/11/99</i>	Completed: 12/13/98
A67	Line of Credit Control System (LOCCS)	600,000	18/1**	Cmpl	<i>Certified: 1/15/99</i>	<b>Completed: 2/14/99</b>
A75	HUD Central Accounting & Program System (HUDCAPS)	1,212,608	2	Cmpl	<i>Certified 7/28/98</i>	Completed: 8/17/98
A80Q	Public Inquiry Communication Subsystem (PICS)	1,687,002	7	Cmpl	<i>Certified 9/29/98</i>	Completed: 12/13/98
A96	Program Accounting System (PAS)	600,000	17/1**	Cmpl	<i>Certified: 1/15/99</i>	<b>Completed: 2/14/99</b>
F17	Computerized Homes Underwriting Management System (CHUMS)	618,210	5	Cmpl	<i>Certified: 1/6/98</i>	Completed: 12/13/98
F51	Institution Master File (IMF)	1,667,667	3	Cmpl	<i>Certified: 11/13/98</i>	Completed: 11/13/98
F87	Tenant Rental Assistance Certification System (TRACS)	2,551,776	2	Cmpl	<i>Certified 7/15/98</i>	Completed: 10/17/98
N31	Integrated Business System (IBS)	1,627,319	2	Cmpl	<i>Certified 9/25/98</i>	Completed: 9/18/98

\*Several systems may have been certified in fewer phases than the number they are renovated in, with modules of related function undergoing certification testing together.

\*\*LOCCS renovated in 18 phases, but underwent certification as a whole system. Similarly, PAS renovated in 17 phases, but was certified in its entirety.

All HUD systems, large and small, mission-critical and non-mission-critical, were implemented into a Year 2000 compliant production environment by March 31, 1999.

- c. **Provide a description of progress in fixing non-mission-critical systems, including measures that demonstrate that progress.**

**RESPONSE:** The chart below, derived from the OMB chart in the response to question II.a., reflects HUD's progress with non-mission-critical systems that are being repaired. As this milestone breakdown reveals, **100 percent** of the non-mission-critical systems being repaired have completed renovation and certification, and have been implemented into a compliant production environment.

**Status of Non-Mission-Critical Systems Being Repaired**

	<b>Total Number of Non-Mission- Critical HUD IT Systems Being Repaired</b>	<b>Assessment</b>	<b>Renovation</b>	<b>Certification (Validation)</b>	<b>Implementation</b>
<b>Milestones</b>		June 1997 3 <sup>rd</sup> Qtr FY 1997	Sept. 30, 1998 4 <sup>th</sup> Qtr FY 1998	Jan. 15, 1999 2 <sup>nd</sup> Qtr FY 1999	March 31, 1999 2 <sup>nd</sup> Qtr FY 1999
<b>Current Number Complete</b>	39	39	39	39	39

**Internal Measurement of Progress**

The next charts demonstrate the Year 2000 status of HUD's entire system inventory, which is how the Department measures its own progress. Two separate charts are provided: one to indicate our certification performance and the second to indicate our implementation achievement. Each chart contains a breakdown of the total inventory into mission-critical and non-mission-critical systems in all disposition categories: Phase Out, To Be Renovated, Already Compliant, and Being Built Compliant. Because of the all-inclusive construction of these charts, the rate of progress listed for the charts below may differ from that listed for the earlier charts that depicted only renovating systems.

The charts below indicate 6 non-mission-critical systems with the disposition To Be Phased Out which are still in the active inventory. One of those systems is scheduled to be deactivated by May 31, 1999; a second by August 31, 1999; three more by September 30, 1999; and the last by November 20, 1999. **All mission-critical systems with the disposition To Be Phased Out were deactivated prior to March 31, 1999.**

**Year 2000 Certification Status of HUD's Entire Active Systems Inventory**

<b>All HUD IT Systems as of April 30, 1999</b>	<b>Total</b>	<b>Certified</b>	<b>Balance</b>
Applications in Inventory	180		

Phasing Out	6		
Requiring Certification	174	174	0
To Be Renovated	80	80	0
Already Compliant	58	58	0
Being Built Compliant	36	36	0
<b>TOTAL</b>	<b>174</b>	<b>174</b>	<b>0</b>
<b>Mission-Critical Systems</b>			
Applications in Inventory	68		
Phasing Out	0		
Requiring Certification	68	68	0
To Be Renovated	43	43	0
Already Compliant	14	14	0
Being Built Compliant	11	11	0
<i>Subtotal</i>	<i>68</i>	<i>68</i>	<i>0</i>
<b>Non-Mission-Critical Systems</b>			
Applications in Inventory	112		
Phasing Out	6		
Requiring Certification	106	106	0
To Be Renovated	39	39	0
Already Compliant	44	44	0
Being Built Compliant	23	23	0
<i>Subtotal</i>	<i>106</i>	<i>106</i>	<i>0</i>
<b>TOTAL</b>	<b>174</b>	<b>174</b>	<b>0</b>

As the above chart depicts, HUD has completed 100 percent of the Year 2000 certification work on its entire inventory. **One hundred percent of HUD's mission-critical and non-mission-critical systems are Year 2000 compliant.**

**Year 2000 Implementation Status of HUD s Entire Active Systems Inventory**

<b>All HUD IT Systems as of February 12, 1999</b>	<b>Total</b>	<b>Implemented</b>	<b>Balance</b>
Applications in Inventory	180		
Phasing Out	6		
Requiring Certification	174	174	0
To Be Renovated	80	80	0
Already Compliant	58	58	0
Being Built Compliant	36	36	0
<b>TOTAL</b>	<b>174</b>	<b>174</b>	<b>0</b>
<b>Mission-Critical Systems</b>			
Applications in Inventory	68		
Phasing Out	0		
Requiring Certification	68	68	0
To Be Renovated	43	43	0
Already Compliant	14	14	0
Being Built Compliant	11	11	0
<i>Subtotal</i>	<i>68</i>	<i>68</i>	<i>0</i>
<b>Non-Mission-Critical Systems</b>			
Applications in Inventory	112		
Phasing Out	6		
Requiring Certification	106	106	0
To Be Renovated	39	39	0
Already Compliant	44	44	0
Being Built Compliant	23	23	0
<i>Subtotal</i>	<i>106</i>	<i>106</i>	<i>0</i>
<b>TOTAL</b>	<b>174</b>	<b>174</b>	<b>0</b>

The chart above reflects HUD s progress for implementation work covering the entire inventory. **One hundred percent of HUD s entire inventory has completed implementation into a compliant production environment.**

- d. **Provide a description of the status of efforts to inventory all data exchanges with outside entities and the method for assuring that those organizations will be or have been contacted, particularly State governments. Provide a description of progress on making data exchanges compliant.**

**RESPONSE:** As of March 31, 1999, all 43 HUD systems with data exchange partners have been implemented into the Department's Year 2000 compliant production environment. These 43 systems account for **149,106** data exchanges/interfaces with HUD business partners. **One hundred percent of HUD's data exchanges are exchanging compliant data as of March 31, 1999.**

The chart below lists the 43 HUD systems with external interfaces, designates whether or not the system is mission-critical, displays the number of data exchanges each system has, and indicates the date each system was implemented into the compliant production environment.

#### **HUD Systems with External Data Exchanges**

<b>System Code</b>	<b>System Acronym</b>	<b>System Name</b>	<b>MISSN CRTCL ?</b>	<b>Number of Data Exchanges</b>	<b>Actual Implement. Date</b>	<b>Planned Implement. Date</b>
A15	GCS	Geographic Code System	YES	4	4/30/98	
A31	SEC.530	Single Family Premium Collections	YES	31,802	3/30/99	
A43C	CLAIMS	Single Family Insurance (Claims)	YES	630	12/13/98	
A43I	SFIS	Single Family Insurance System	YES	4,000	12/13/98	
A49	NCBRS	National Credit Bureau Referral System	YES	5	8/27/98	
A51	FAADS	Federal Assistance Awards Data System	NO	1	7/16/98	
A67	LOCCS	Line of Credit Control System	YES	27,769	2/14/99	
A75	HUDCAPS	HUD Central Accounting and Program System	YES	4	8/17/98	
A75I	PSCS	Administrative Accounting Personal SVCS Cost RPT Subsystem	NO	1	9/30/98	
A80D	DSRS	Distributed Shares and Refund Subsystem	YES	5	9/30/97	
A80N	SFMNS	Single Family Mortgage Notes Subsystem	YES	5	1/6/99	
A80RU	SFPCS	Single Family Premiums Collection Upfront Subsystem	YES	5	4/6/97	
A80S	SAMS	Single Family Acquired Asset Management System	YES	6	9/29/98	
A91	CCFF	Consolidated Cost & FTE Files	NO	1	5/6/98	
A80Q	PICS	Public Inquiry Communication Subsystem	YES	2	12/13/98	



System Code	System Acronym	System Name	MISSN CRTCL ?	Number of Data Exchanges	Actual Implement. Date	Planned Implement. Date
B07	CLS	Commitment Line System	YES	2	10/15/98	
B11	PTS	Pool Transfer System	YES	710	10/22/98	
B15	CHRIS	Check Record Issuance System	YES	2	12/20/97	
C381	TITLE V	Title V	NO	1	12/29/98	
D05	OPTIS	OHR Office of Personnel & Training Inquiry System	NO	1	3/30/98	
D21	DARTS	Departmental Accounts Receivable Tracking/Collection System	YES	1	7/21/98	
D43	NFC/PC-TARE	Personal Computer Time and Attendance Remote Entry	NO	1	2/4/98	
D72P	HATS	Human Resources Action Tracking System	NO	1	8/24/98	
F12	HECM	Home Equity Conversion Mortgages	YES	2	12/18/98	
F17C*	FHAC	FHA Connection (see footnote)	NO	6,522	12/13/98	
F31	CCARS	Cash Control Accounting and Reporting System	YES	1	1/10/98	
F37A	SPIRUT	Staff Profile Information and Res. Utilization Tracking Data Warehouse	NO	1	6/22/98	
F42	CSFSS	Consolidated Single Family Statistical System	YES	2	8/17/98	
F42D	SFDMS	Single Family Default Monitoring System	YES	17,160	8/31/97	
F42H	HMDA	Home Mortgage Disclosure Act	YES	1	11/25/97	
F46	PMS	Multi-Family Property Management System	YES	1	5/4/98	
F47	MFIS	Multifamily Insurance System	YES	2	3/31/99	
F49	MARS	Multi-Family Accounting, Reporting and Servicing	YES	1	5/4/98	
F51	IMF	Institution Master File	YES	2	11/13/98	
F55	TEV	Tenant Eligibility Verification System	YES	2	9/25/98	
F71	DMCS	Title I Notes Servicing Debt Management Collection System	YES	2	1/16/99	
F72	TIIS	Title I Insurance and Claims	YES	1	2/11/99	
F86	MTCS	Multifamily Tenant Characteristics System	NO	4,430	9/30/98	
F87	TRACS	Tenant Rental Assistance Certification System	YES	28,218	10/17/98	

System Code	System Acronym	System Name	MISSN CRTCL ?	Number of Data Exchanges	Actual Implement. Date	Planned Implement. Date
F89A	AFS	Annual Financial Statements	NO	25,000	6/30/98	
H09	LRAP	Labor Relations 2000	NO	1	3/15/99	
J04A	RAPS	Regulatory Agenda Processing System	NO	1	3/31/98	
T25	AHS	American Housing Survey	NO	1	10/6/98	

\*FHAC, system code F17C, has replaced CLAS, system code F17A, as the data exchange interface for the Computerized Homes Underwriting Management System (CHUMS), system code F17. CLAS has been deactivated and removed from this list. All 9,317 data exchanges going to CHUMS are interfacing through FHAC and are Year 2000 compliant. The deactivation of CLAS brings the total number of HUD systems with external data exchanges to 43.

### Inventory

HUD has identified an exhaustive list of data exchange business partners—approximately 84,000 institutions and individuals—who interface with the Department through the 44 systems listed above. The total number of data exchanges/interfaces (149,106) exceeds the number of business partners because many partners interface with more than one HUD system. The inventory of data exchanges was assembled in response to concerns and encouragement from OMB, the General Accounting Office (GAO), the Chief Information Officer (CIO) Council Committee on Year 2000, and the Chairman of the President's Council on Year 2000 Conversion, Mr. John Koskinen. **One hundred percent of HUD's data exchanges are exchanging compliant data as of March 31, 1999.**

The specific data exchanges with States have been compiled, posted on HUD's Year 2000 Web site, and sent to the General Services Administration (GSA) on July 24, 1998, for posting to the GSA State Data Exchange Web site. The last update to that data was April 29, 1999.

HUD is making its date formats available on its Internet site. Business partners and other interested parties may access the format information at **[www.hud.gov/cio/year2000/](http://www.hud.gov/cio/year2000/)**. Included with the date formats are the names and telephone numbers of program area points of contact, who know the applications from a business perspective.

Also posted at the site is a business partner information letter, signed by Deputy Secretary, Saul N. Ramirez, Jr., which was mailed to all of HUD's data exchange partners to inform them of HUD's Year 2000 plans for bringing all systems into compliance for the Year 2000. Other information posted at the site include an information brochure directed at HUD's business partners, the Department's reports to OMB, HUD's Year 2000 Readiness Guide, and the instructional video (webcast) and workbook "Six Steps to Year 2000 Readiness" (see the response to question II.i.).

### **Awareness**

HUD is continuing an extensive outreach program, led by HUD's Chief Information Officer, Gloria Parker, to profile the housing sector of the United States economy. The Department of Agriculture, the Department of Defense, and the Department of Veterans Affairs are participating in this working group. This profile will ensure a comprehensive assessment of the housing sector's Year 2000 readiness. It will also enable rapid response should disruption occur. To support this assessment, HUD has distributed approximately 14,000 Year 2000 Assessment Surveys to Public Housing Authorities, Multifamily agents, and Tribally Designated Housing Entities. The initial survey responses were due April 1, 1999, while the follow-up survey responses are due June 1, 1999. Housing Sector assessment results will be published in late May 1999 and July 1999. Other activities promoting Year 2000 awareness to data exchange partners are outlined in the response to question II.i.

### **Testing**

The Department's testing efforts follow HUD's standard systems development approach. Initially, HUD performed unit and system testing at the computer application level and affirmed that the revised format was successfully accepted or created by the application system. Often, end-user exchange partners are engaged in these tests, though their level of involvement in the process varies depending on the nature of the application.

Between May and August 1999, HUD will perform end-to-end, integrated certification testing (ICeT). The ICeT groups HUD's business applications into clusters based upon HUD's main business functions as identified in the Year 2000 Business Process Continuity Contingency Plan (BPCCP). These functions are split into nine (09) clusters to be tested. They are as follows:

<b>CLUSTER NAME</b>	<b>DESCRIPTION</b>
<b>1a - Single Family Insurance</b>	Tests four main Single Family business processes: underwrite insurance, service insurance, terminate insurance and manage property.
<b>1b - Multi Family Insurance</b>	Tests four main Multi Family business processes: underwrite insurance, service insurance, terminate insurance and manage property.
<b>1c - Title 1 Insurance</b>	Tests Title 1 processing, underwriting, updating, claims administration and foreclosure.
<b>2 - Provide Rental Assistance</b>	tests the processes related to Section 8 subsidy payments.
<b>3 - Assessment of HUD Properties</b>	Tests the monitoring and assessment of the physical and financial conditions of HUD properties.
<b>4 - Provide Grants</b>	Tests a wide range of HUD grants and the provision of Housing Authority operating subsidies.
<b>5 - Enforcement and FHEO</b>	Includes the two main organizations which ensure that HUD programs are administered fairly and legally, FHEO and the Enforcement Center.
<b>6 - Mortgage Backed Securities</b>	Tests the Ginnie Mae Mortgage-Backed Securities Program and the Multiclass Securities Program.
<b>7 - Administrative and Management Systems</b>	Tests other cluster business functions by performing accounting, administrative, budgeting, payroll and other managerial functions.

The ICeT Goals are to validate that the core business functions will be supported by HUD's systems, interfaces, and business partners in a forward date environment; test from a business versus a system perspective; and find and correct errors not detected by Year 2000 System Testing, or errors beyond the scope of Y2K System Testing. The essential elements of each critical business function will be tested. All direct external interfaces will be tested. At least one of each data pathway in and out will be tested, as will one of all data formats and transition media, and one of each business scenario.

The process for the ICeT for each cluster involves the following steps:

STEP	COMPLETION
Test Planning	2ND QTR CY 1999
Test preparation	2ND QTR CY 1999
Test data generation	2ND QTR CY 1999
Test execution	3RD QTR CY 1999
Confirmation and sign-off	3RD QTR CY 1999

HUD intends to place information regarding the ICeT on its Web Site, [www.hud.gov/cio/year2000/](http://www.hud.gov/cio/year2000/), within the next few weeks. This information will provide an overview of HUD's ICeT, and information on the approach, goals and scope of ICeT. The information will also include an ICeT schedule, by phase.

Business Partners who are not testing with HUD will be able to look at HUD's Web Site, and as testing proceeds, find updated information on the Site. For those who feel they must test with HUD, information regarding their interface with HUD, along with contact information, should be sent to one of the following:

Phone: 202-755-2000  
FAX: 202-401-5716  
E-mail: team\_2000@hud.gov

Once this information is received, someone from HUD will discuss their needs with them.

- e. **Provide a description of efforts to address the year 2000 problem in other areas, including biomedical and laboratory equipment, and any other products or devices using embedded chips.**

**RESPONSE:** As of April 30, 1999, **32 of 34** component classes (**95 percent** of the inventory) were Year 2000 compliant (see the chart *Embedded Microchip Compliance Progress* on page 13).

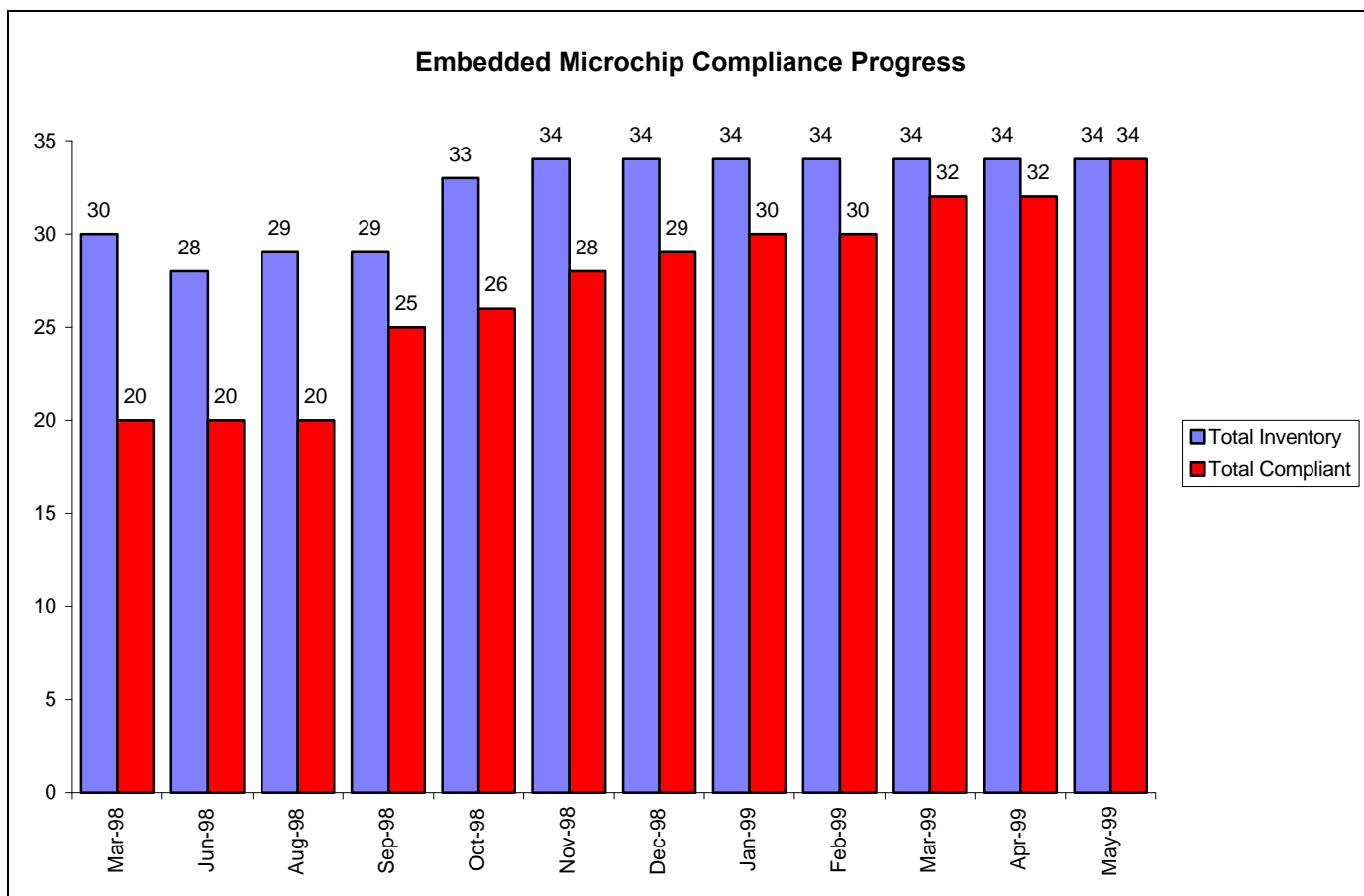
In the area of embedded microchips, a component class is defined by functionality (all devices in the group function similarly), *and* by the sharing of a distinct microchip problem and solution to that problem. For example: all the pagers in HUD's inventory are functionally similar and have the same microchip problem/solution. They therefore comprise one component class. On the other hand, though HUD's four voice mail systems function similarly, they have four

distinct microchip problems/solutions, and therefore comprise four component classes (see chart *Items in the Inventory of Component Classes* on page 14).

During this reporting period, two component classes were determined not to be adversely affected by any Year 2000 related issues. United Parcel Service (UPS) and Federal Express (FedEx) have contract agreements with HUD and the General Services Administration (GSA) to provide shipping services for the Department. Letters have been received from both companies verifying that their systems will be fully operational at the turn of the century.

In addition, the two remaining components, the off-site storage/retrieval system and the parking garage access arm, have been upgraded and are currently being tested. Year 2000 Certification of these two systems is expected no later than May 31, 1999.

All devices containing embedded microchips are anticipated to be Year 2000 compliant no later than May 31, 1999.



### **Items in the Inventory of Component Classes**

- Phone Systems (2)
- Voice Response Systems (3 groups)
- Pagers
- Parking Garage
- Postage Machines (4)
- Print Server
- Visual Arts Software
- Security Phones
- Records/Retention
- Facsimiles (2 groups)
- Voice Mail (4 groups)
- Motor Pool (3 cars)
- Office Safety
- Conveyors
- Copiers (6 groups)
- Library System
- Elevators

- f. **Provide a description of efforts to address the year 2000 problem for buildings that your agency owns or manages. If your buildings are owned or managed by GSA, you do not have to report on those buildings. Please indicate instead, whether or not you are a member of the Building Systems Working Group of the Year 2000 Subcommittee of the CIO Council.**

**RESPONSE:** HUD is responsible for facilities management of the HUD Headquarters building at 451 7<sup>th</sup> Street, SW, Washington, DC. All other buildings HUD occupies are managed GSA. HUD is a member of the Building Systems Working Group of the CIO Council Committee on Year 2000.

All devices containing embedded microchips are anticipated to be compliant no later than May 31, 1999.

- g. **Provide a description of efforts to address the year 2000 problem in the telecommunications systems that your agency owns or manages. If your systems are owned or managed by GSA, you do not have to report on those systems. Please indicate instead whether or not you are a member of the Year 2000 Subcommittee of the CIO Council.**

**RESPONSE:** The Department has developed a Year 2000 Telecommunications Program to ensure that HUD's telecommunications systems, like its application systems, will be fully functional before, during and after the Year 2000.

HUD's inventory is broken out by high level categories called Sub-systems. All 271 telecommunication sub-systems (**100 percent**) have been upgraded,

validated Year 2000 compliant, and placed in operation as of March 31, 1999. The following matrix summarizes HUD's status based upon Sub-systems:

Description of Sub-System	Assessed	Upgrading	Compliant	Total
EDI	17	0	17	17
File Servers	62	0	62	62
Internet	55	0	55	55
LAN	49	0	49	49
WAN	71	0	71	71
Video Conferencing	17	0	17	17
<b>TOTAL:</b>	<b>271</b>	<b>0</b>	<b>271</b>	<b>271</b>

The Department does not plan to purchase any additional telecommunications equipment until after January 1, 2000. This ensures that the inventory will remain compliant.

Team 2000 members and HUD's telecommunication managers participate in the CIO Council Committee on Year 2000, GSA Telecommunications Subcommittee meetings, work groups, and sponsored forums. GSA has provided the Department with guidelines for testing and contingency planning. In turn, HUD is sharing information on its activities and test experience with the GSA subcommittee.

- h. **Provide a description of the status of the Year 2000 readiness of each government-wide system operated by your agency (e.g., GSA will report on FTS 2000).**

**RESPONSE:** The only government-wide system that the Department operates is the Credit Alert Interactive Voice Response System (CAIVRS). CAIVRS provides information on whether or not a borrower (or co-borrower) is currently in default or has had a claim on an FHA mortgage within the last three years. The other federal agencies using CAIVRS are the Department of Agriculture, the Department of Veterans Affairs, the Small Business Administration, the Department of Education, and the Department of Justice.

CAIVRS completed renovation on February 18, 1998, and finished system testing on April 5. It was certified Year 2000 compliant on April 24, and was implemented into the production environment on May 5, 1998, two months ahead of schedule.

- i. **Please include any additional information that demonstrates your agency's progress. This could include charts or graphs indicating actual progress against your agency's schedule, lists of mission-critical systems with schedules, success stories, or other presentations.**

**RESPONSE:**

**Insight into Ginnie Mae Integrated Y2K Testing**

Ginnie Mae has been very proactive in its posture towards addressing the Year 2000 problem within its information systems. Beginning in 1996, Ginnie Mae performed a preliminary impact analysis to assess the impact of the date rollover on critical business system applications. This effort provided the underlying support to specify, to each of Ginnie Mae's business partners, the expectations required to remediate Ginnie Mae's systems. As of June 30, 1998, each of these business partners who perform services in support of Ginnie Mae operations had remediated the mission critical business systems. Following remediation and validation, each of these critical systems were implemented in the production environment. To ensure Ginnie Mae's Year 2000 readiness, it has developed a Year 2000 Business Continuity Contingency Plan. Pivotal to developing this plan was the need to identify the mission critical business functions of Ginnie Mae. The identification of these business functions has been used to focus testing and resource planning throughout the preparedness process.

As part of the mortgage industry response to the Year 2000 challenge, the Mortgage Banking Association (MBA) sponsored an industry-wide test to enable business partners to execute business transactions and share data in a Year 2000 environment. Testing began on March 6, 1999, and concluded on May 6, 1999. Ginnie Mae will be planning additional test dates for industry participants who were not able or ready to test.

This effort was planned with the participation of Ginnie Mae, Fannie Mae, Freddie Mac, the MBA, and major mortgage banking institutions. The approach taken by the MBA was to identify key business transactions throughout the life of a mortgage loan and build corresponding test transactions. The MBA required test participants to have already completed internal testing. Ginnie Mae strongly encouraged its issuers to participate in the test.

As part of the MBA Y2K readiness test, Ginnie Mae conducted end-to-end tests of three transactions that pose the highest risk to Ginnie Mae in the event of a Y2K failure:

- Issuance of new pools through GinnieNET;
- Reporting security balances;
- Payments to Investors.

Ginnie Mae issuers testing these transactions (or where appropriate, their service bureaus) had completed Y2K remediation and testing of their own computer based systems. They also had the ability to simulate future dates and had a test database to use for the test.



The test results, which are still being analyzed, will be used not only to assist Ginnie Mae, but also to provide valuable feedback to assist issuers and other business partners with their ongoing Year 2000 program initiatives. Ginnie Mae has interfaces with 91,700 stakeholders, including active issuers, GinnieNET custodians, Ginnie Mae investors, REMIC Trustees, and Platinum Sponsors. The Year 2000 integrated testing has required a close, almost seamless working cooperation with these business partners.

### **Issuance of new pools through GinnieNET**

Through the course of the integrated testing, Ginnie Mae issuers have:

- Updated their computer systems with the loan level detail provided in the MBA Y2K readiness test packet;
- Generated the loan detail import file for GinnieNET
- Added the pool and loan level detail to GinnieNET
- Submitted the pool to GinnieNET network
- Had their document custodian initially certify the pool.

Chase, as Ginnie Mae's Pool Processing Agent, using the simulated dates has:

- Pulled the certified pools off the GinnieNET network
- Processed the pools through the mainframe
- Re-edited the pools,
- Checked for master agreements

CLS, using the simulated dates has:

- Verified the issuer's status to issue pools
- Checked the available commitment authority and obligated the funds
- Returned a transmission to Chase acknowledging pools are updated
- Generated a report identifying any rejections.

Chase, as Ginnie Mae's Pool Processing Agent has:

- Updated the mainframe with the CLS acknowledgment
- Released (i.e., approve) the pools
- Transmitted the release and settled pool files to the MBS Division of DTC
- Created the daily and weekly pool issues tapes (for use by other business partners).

### **Reporting security balances**

Through the course of the integrated testing, Ginnie Mae issuers (or service bureaus) using the simulated dates have:

- Updated their computer systems with the pool detail provided in the MBA Y2K readiness test packet
- Transmitted the file with the security balances to Global Payment Systems (GPS)

Chase, as Ginnie Mae's Registry/Transfer/Paying Agent has:

- Received the file from GPS
- Processed the data in their mainframe (including calculation of factors)
- Transmitted the balances to CLS (including balances for Platinum pools which are not part of the MBA test)
- Created factor tapes for other business partners
- Transmitted the factors to the MBS Division of DTC

### **Payments to Investors**

Through the course of the integrated testing, Ginnie Mae issuers (or service bureaus) using the simulated dates have:

- Updated their computer systems with the pool detail provided in the MBA Y2K readiness test packet
- Created the file for the form HUD 11714 - Remittance Advice
- Transmitted the file to the MBS Division of DTC

The MBS Division of DTC using the simulated dates has:

- Processed the file through their system
- Effected payments to their investors

### **Awareness**

HUD is continuing an extensive outreach program, led by HUD's Chief Information Officer, Gloria Parker, to profile the housing sector of the United States economy. The Department of Agriculture, the Department of Defense, and the Department of Veterans Affairs are participating in this working group. This profile will ensure a comprehensive assessment of the housing sector's Year 2000 readiness. To support this assessment, HUD has distributed approximately 14,000 Year 2000 Assessment Surveys to Public Housing Authorities, Multifamily agents, and Tribally Designated Housing Entities. The initial survey responses were due April 1, 1999, while the follow-up survey responses are due June 1, 1999. Housing Sector assessment results will be published in late May 1999 and July 1999.

### **Outreach to Business Partners and HUD Field Offices**

HUD continues to provide information on Year 2000 issues and solutions to business partners, Department personnel, and local, State, and Federal Officials. Copies of HUD's Y2K brochure, directed at the Department's data exchange partners, were also distributed at each of the speaking engagements listed below:

- Pamela Woodside, HUD's Team 2000 Project Manager, delivered a speech on Year 2000 Awareness at the Good Shepherd Housing Association meeting in Alexandria, VA on March 9, 1999.

- Ms. Woodside delivered a speech on Year 2000 Challenges and Successes at a Year 2000 Business Continuity Contingency Plan conference in Arlington, VA on March 16, 1999.
- Ms. Woodside delivered a speech on Preparing for the Year 2000 to Officials from the Japanese Embassy in Washington, DC on March 25, 1999.
- Gloria Parker, HUD's Chief Information Officer, delivered a speech on Preparing for the Year 2000 at the Native American Homeownership, Legal, and Economic Development Summit in Chicago, IL on April 1, 1999.
- Ms. Woodside delivered a speech on Year 2000 Awareness at the National Association of Housing and Redevelopment Officials (NAHRO) Mid-Atlantic Regional Conference in Brooklyn, NY on April 19, 1999.
- Team 2000 representatives delivered a speech on Preparing for the Year 2000 at the HUD Los Angeles Field Office on April 21, 1999.
- Ms. Woodside delivered a speech on Year 2000 Awareness at the American Association of Homes and Services for the Aging conference in Washington, DC on April 22, 1999.
- Team 2000 representatives delivered a speech on Preparing for the Year 2000 at the HUD Santa Ana Homeownership Center on April 21, 1999.

### **Video and Workbook**

As a result of a national telephone survey conducted by HUD's Team 2000 at the end of November 1998, the Department determined that although many have heard of the Year 2000 problem, there are still many of HUD's business partners who have only recently begun to address the issue, and don't have a real appreciation of how to proceed effectively.

To address this problem, Team 2000 created a 30 minute instructional videotape and 25 page companion workbook entitled ***Six Steps to Year 2000 Readiness***. The video and workbook are designed to promote action on the part of the business partner, by providing concise steps, sample letters, comprehensive lists and model products to guide the agent in how to most effectively prepare the facility for the advent of the Year 2000.

The video premiered in a satellite broadcast on March 30, 1999, during Small Business Y2K Action Week, sponsored by the President's Council on Year 2000 Conversion and the U.S. Small Business Administration. **An audience of approximately 1,500 viewed the broadcast at over 125 sites across the country**, including HUD Field Offices and member sites of the Housing Television Network. The broadcast included a live, 90-minute question and answer session that viewers could participate in by calling a toll-free number. The session featured a panel of Housing and Year 2000 experts, including John Koskinen, Chair of the President's Council on Year 2000 Conversion, William Apgar, HUD's Assistant Secretary for Housing and Federal Housing Administration (FHA) Chairman, Michael Jawer of the Building Owners and

Managers Association (BOMA) International, Elizabeth Hanson, Director of HUD's Field Operations for Public and Indian Housing, Larry Loyd, Executive Director of the Anne Arundel County, MD, Housing Authority, and Pamela Woodside, HUD's Year 2000 Project Manager. The panel moderator and program host was Gloria Parker, HUD's Chief Information Officer.

**Copies of the video and workbook, along with a pamphlet of Frequently Asked Questions (FAQ) have been mailed to over 14,000 HUD business partners**, including Multifamily housing agents and Public Housing Agencies, Tribes and Tribally Designated Housing Entities. HUD Field Offices and national associations of housing and public housing professionals have also received the *Six Steps* package. The tape and workbook is being used by Team 2000 and others for Year 2000 presentations at meetings and conferences across the nation. In addition, the workbook, FAQ, and "webcast" of the video may be downloaded from the HUD Web Site at ***www.hud.gov/cio/year2000/***.

- j. **Describe efforts to ensure that Federally-supported, State run programs (including those programs run by Territories and the District of Columbia) will be able to provide services and benefits. In particular, Federal agencies should be sensitive to programs that will have a direct and immediate affect on individuals health, safety, or well-being. Include a description of efforts to assess the impact of the Year 2000 problem and to assure that the program will operate. In addition, provide the following information for those programs listed in Attachment D (if the information is not available, provide dates when it will be available). [NOTE: The programs listed in Attachment D are either HHS, DOL or USDA programs.]**
1. **The date when each State s systems supporting the program will be Y2K compliant.**
  2. **A list of States, if any, for which the Y2K problem is likely to cause significant difficulties in the States operation of the program. Also provide a list of States which are not likely to encounter significant difficulties.**
  3. **For those States likely to have significant difficulties, a brief description of any action that the Department is taking to assure that the program will operate.**

**RESPONSE:** Through the Department's outreach efforts, HUD has conducted several data gathering efforts to assess how the readiness of its business partners may influence the effectiveness of its programs. HUD has further examined where other Federal agencies are having an impact on its business partner community. With this analysis, HUD has isolated, first, the community of business partners whom HUD believes are less well prepared, and second, where HUD is focusing its efforts. In effect, HUD acknowledges that although the banking industry has a profound impact on insurance and affordable housing, other agencies, including the Federal Reserve and the Federal Deposit Insurance Corporation are providing oversight and leadership to the banking

industry. Public Housing Agencies and State Housing Finance Agencies, on the other hand, are key providers of housing but who are benefactors of far less attention than that of our banking partners. HUD is, therefore, concentrating its efforts to deliver immediate and profound assistance to this partner community. The assistance HUD is pursuing takes two forms; one of policy and one of more technical assistance.

**Policy assistance:** Through discussions with national associations, HUD's own program area managers, and others, we continue to explore and understand the impact the Year 2000 problem is having on these business partners. HUD is examining its policies to consider if alterations would facilitate the partners' ability to respond and manage the risks. To exemplify this issue, consideration is being given to whether or not it would be effective to include Year 2000 readiness as criteria to be included in, for example, HUD's Annual Financial Audits or in its Enforcement Centers.

**Technical assistance:** (See the response to question II.i., "Video and Workbook")

### III. Verification Efforts.

- a. **Describe the process by which mission critical systems are identified as Y2K compliant for purposes of this report.**

**RESPONSE:** The Department awards the classification of "certified" to mission-critical systems, if and only if, a review team has confirmed that the software has been tested successfully in a forward-dated, Year 2000 compliant environment according to standard Year 2000 compliance scenarios and guidelines. The category compliant, in this report, includes certified systems as well as systems that had been assessed, originally, as Compliant and Already in Production.

We are aware of some confusion regarding whether or not we should consider systems **compliant only when implemented**. For HUD, the distinction is moot. All of HUD's certified mission-critical systems were implemented into a compliant production environment by February 14, 1999.

- b. **Describe how and to what extent internal performance reports (i.e., compliance of systems repaired and replaced) are independently verified. Provide a brief description of activities to assure independent verification that systems are fixed and to assure that information reported is accurate. Also, identify who is providing verification services (i.e., Inspectors General or contractors).**

**RESPONSE:** The Department retained PricewaterhouseCoopers LLP (PwC) to provide independent verification and validation services to assist HUD

management with the Year 2000 Project. The primary objective of PwC's continuing work is to identify potential risks associated with the Department's Year 2000 compliance effort.

Since the February, 1999 Quarterly Report, PwC has reviewed and analyzed HUD's:

- Integrated Certification Test (ICeT) work planning phase critical success factors
- Integrated Certification Test (ICeT) external interfaces
- Integrated Certification Test (ICeT) test environment
- Integrated Certification Test (ICeT) test planning
- Business Process Continuity Contingency Plans (BPCCP)
- Program office participation in the Department's Year 2000 readiness effort.

PwC presented their findings to the Chief Information Officer and her staff. Team 2000 staff members working on the ICeT and BPCCP have scheduled meetings to resolve the concerns raised by the PwC team, which are outlined below:

#### **Integrated Certification Test (ICeT):**

PwC conducted an interim analysis of ICeT progress using the working planning phase critical success factors listed in the ICeT Approach Document as performance indicators. The analysis is divided into three phases: work planning, test preparation, test execution. The team identified potential risks based on a survey of ICeT participants:

- Staff shortages and competing requirements could lead to schedule delays
- Program areas were late identifying ICeT participants
- Business partner identification and communication was not complete
- No evidence of CM resource identification and allocation, or CM process
- CM responsibility was not documented in cluster work packages
- The issue log was not used.

#### **Integrated Certification Test (ICeT) External Interfaces**

PwC conducted an interim analysis of ICeT progress using the working planning phase critical success factors listed in the ICeT Approach Document as performance indicators. The analysis is divided into three phases: work planning, test preparation, test execution.

The PwC team identified potential risks based on a survey of ICeT participants, including concerns about staffing levels and schedules, testing participant identification and communication, change management controls, inclusion of the full range of external interfaces, and test environment issues.

The team also monitored preparation for the test execution phase by analyzing the weekly status report on progress in the ICeT phases. They identified verification and validation concerns regarding plan approval by program area

representatives prior to testing, and the deliverable content prescribed in the ICeT Approach.

#### **Business Process Continuity Contingency Plans (BPCCP)**

PwC reviewed HUD's approach to management and coordination of BPCCP and ICeT activities. Although both efforts are based on the five core business functions identified in the master BPCCP, they are managed as independent project tasks. PwC recommended combined management of these efforts.

#### **Program Office Participation In The Department's Year 2000 Readiness Effort**

PwC continues to monitor the level of program office participation in HUD's Year 2000 readiness effort. Through the consistent effort of Team 2000 and the CIO, the Department is developing a better, more widespread appreciation of the business issues of Year 2000. Through participation in the Department's Technology Investment Board Executive Committee, and through direct meetings with the CIO, executive staff is becoming more involved in ICeT testing and business process continuity contingency planning.

#### **IV. Organizational Responsibilities.**

- a. **Describe how your Department/Agency is organized to track progress in addressing the year 2000 problem. (If you have provided this information in the past, only provide it again where it has changed.) Include in your description the following:**
  1. **Describe the responsible organizations for addressing the Year 2000 problem within your Department/Agency and provide an organization chart.**

**RESPONSE:** HUD's basic organizational structure for Year 2000 activities has been in place since June 1996, when the Year 2000 Project Office (Team 2000) was established.

In December 1998, Team 2000, and the Year 2000 effort at HUD, came under the direct responsibility and authority of the Chief Information Officer (CIO), Gloria R. Parker. Mrs. Parker has overseen the successful completion of the certification and implementation phases of the Department's mission-critical and non-mission-critical systems, and is directing the focus of HUD's Year 2000 efforts from the completed systems activities to the delivery of HUD programs to the public.

This shift of focus has necessitated an evolution in the organizational relationship between the Office of the CIO, the Office of Information Technology (IT), and the HUD program areas. In this new relationship, Team 2000, under the direction of the CIO, is coordinating with IT and the program areas on integrated certification testing modules which will further demonstrate the Year 2000 readiness of HUD's systems and will

provide evidence that HUD programs will be fully functional before, during, and after January 1, 2000.

Below is a listing of HUD's key Year 2000 personnel during this reporting period:

- Saul N. Ramirez, Jr., Deputy Secretary
- Gloria R. Parker, Chief Information Officer
- Pamela Woodside, Team 2000 Project Manager
- Scott Cragg, Director, Office of Information Technology
- Michael Cunningham, Acting Director, Systems Engineering Group
- George S. Anderson, Executive Vice President, Government National Mortgage Association (Ginnie Mae)
- William C. Apgar, Assistant Secretary, Housing
- V. Stephen Carberry, Chief Procurement Officer
- Cardell Cooper, Senior Advisor, Community Planning and Development
- William E. Dobrzykowski, Deputy Chief Financial Officer
- Edward J. Kraus, Director, Enforcement Center
- Gail W. Laster, General Counsel
- Donald J. LaVoy, Acting Director, Real Estate Assessment Center
- Harold Lucas, Assistant Secretary, Public and Indian Housing
- Eva M. Plaza, Assistant Secretary, Fair Housing and Equal Opportunity
- Joseph Smith, Acting Assistant Secretary for Administration

As CIO, Mrs. Parker has the primary responsibility for ensuring that all elements that support the business operations of HUD—IT systems and non-IT facilities and services—remain fully functional before, during, and after the Year 2000. The program also receives the direct oversight attention of both Secretary Andrew Cuomo and Deputy Secretary Saul Ramirez, Jr., and is reviewed at the monthly Technology Investment Board Executive Committee meeting. The Office of the CIO and the Office of Information Technology are working together in close cooperation, and have the full confidence and support of the Secretary and Deputy.

The CIO's primary support in the Year 2000 organization comes from two sources. Ms. Woodside, the Team 2000 Project Manager, has the day-to-day responsibility of tracking and reporting HUD's Year 2000 progress. Mr. Cragg and Mr. Cunningham manage the resources necessary to ensure that the system corrections made for Year 2000 remain in place, and that HUD's systems are adequately tested with the Department's business partners to demonstrate that the HUD's programs will continued to be delivered in the new century.

Recertification of all previously certified code is the direct responsibility of Ms. Woodside and Team 2000.



Year 2000 corrections involving non-IT systems, telecommunications, and other facilities are being handled by the HUD personnel who are specifically in charge of those areas, with guidance and direction from the CIO and Ms. Woodside.

Mr. Ramirez, as Deputy Secretary, is responsible for Year 2000 awareness and priorities at the highest Departmental level. He is kept informed of Year 2000 progress and issues on a continual basis by the CIO. The CIO also presents monthly Year 2000 status updates to HUD Secretary Andrew Cuomo, at the Technology Investment Board Executive Committee meetings.

- 2. Describe your Department/Agency's processes for assuring internal accountability of the responsible organizations. Indicate how frequently the agency head or Chief Operating Officer is briefed on Year 2000 progress. Include any quantitative measures used to track performance and other methods to determine whether the responsible organizations are performing according to plan. Include a discussion of the oversight mechanism(s) used to assure that replacement systems are on schedule.**

**RESPONSE:** The processes HUD has used to assure internal accountability, as documented in previous Quarterly reports, have proven successful. All of HUD's mission-critical and non-mission-critical systems have been renovated, certified Year 2000 compliant, and implemented into a compliant production environment on, or in advance of, OMB schedule milestones. Additionally, 100 percent of HUD's telecommunications sub-systems and embedded microchip devices are Year 2000 compliant and operational.

With the initial milestones completed, the Department has turned its focus to ensuring that the compliance status of HUD's application inventory is not compromised during the remainder of 1999, that is, what has been certified Year 2000 compliant remains compliant. At the center of this effort is HUD's Year 2000 Recertification Process. The process consists of six steps during which the Team 2000 Certification Team and the OIT Application Team will address modifications to the application code previously certified and released into production. Those steps are:

1. A Recertification Evaluation Meeting;
2. Submission and Review of a Test Plan;
3. A Test Preparation Meeting;
4. Recertification Testing;
5. A Recertification Walk-Through; and
6. Certification Review Board sign-off.

The recertification effort is focusing on Year 2000 issues relevant to the modified code, i.e., date functionality, system interfaces, test plan,

system documentation, and test results as they pertain to Year 2000 issues.

In addition to the Recertification Process outlined above, Team 2000 utilizes the FY1999 Integrated Implementation Plan (IIP) to monitor and report on the Year 2000 certification status of new development initiatives and enhancements to existing systems. The Year 2000 certification status is continually reviewed by the Team 2000 Project Manager, where risk is assessed and corrective action initiated, and is reported to the CIO and senior IT management on a weekly basis.

Higher level management oversight continues to be provided to the Year 2000 project on a weekly, monthly, and quarterly basis by Mrs. Parker, Mr. Cragg, and Mr. Cunningham. Mrs. Parker provides regular updates on the Year 2000 project to the Technology Investment Board Executive Committee, which is chaired by the Secretary and comprised of his Principal Staff.

### **Replacement Systems**

The oversight mechanisms HUD has used to assure that replacement systems were on schedule have likewise proven successful. All of HUD's systems, both mission-critical and non-mission-critical, classified with the disposition "To Be Phased Out With Replacement," were replaced with systems that were certified Year 2000 compliant and implemented into a compliant production environment prior to March 31, 1999. Furthermore, the replaced systems have all been deactivated.

3. **Describe the management actions taken and by whom, when a responsible organization falls behind schedule.**

**RESPONSE:** This is no longer applicable to HUD's situation. The Department has completed the Year 2000 renovation, certification, and implementation of all of its mission-critical and non-mission critical systems, on or in advance of the OMB schedule milestones.

## **V. Continuity of Business Plans**

**Describe your agency's approach to and progress in developing its Business Continuity and Contingency Plan (BCCP). Agencies should use the GAO document, Year 2000 Computing Crisis: Business continuity and contingency Planning, August 1998), as a guide to such planning. Describe the measures of progress being used to assure that local plans are developed and tested (e.g., status of management assurances that plans are complete and have been tested) and provide a status of those measures. Please also include the following information in the description of your planning activity (If you do not have the information requested, state when it will be available.):**

1. **Identify the high-level core business functions addressed in your BCCP.**
2. **Provide a master schedule and key milestones for development, testing, and implementation of your BCCP.**

**RESPONSE:** In accordance with the GAO guidelines, HUD's Business Process Continuity Contingency Plan (BPCCP) was completed on June 30, 1998, and a copy was attached to HUD's August Quarterly Report. The BPCCP is a high-level document that identifies possible risks and/or threats due to Year 2000 failures in HUD systems and non-HUD systems, as well as who would be affected by those failures. The final draft of the BPCCP was approved by all Assistant Secretaries and Center directors on October 8, 1998.

Year 2000 Contingency Plans that relate directly to the approved BPCCP were completed on January 11, 1999. In support of the high-level identifications of business risks in the BPCCP, thirty detailed contingency plans have been written identifying the specific steps HUD will take to ensure the continuity of core business functions. The thirty detailed contingency plans were approved by the Assistant Secretaries and Center directors on February 12, 1999.

Following the completion of the thirty detailed contingency plans, HUD's Year 2000 Independent Verification and Validation (IV&V) team reviewed and analyzed the Year 2000 contingency plans. The IV&V recommendations were incorporated into the detailed contingency plans on April 26, 1999. The updated plans are currently going through the process of concurrence by all Assistant Secretaries and Center directors. Concurrence is expected from all executives by May 21, 1999.

A business resumption team has been designated for each contingency plan. They are responsible for updating their individual contingency plans continually and these plans will be reviewed quarterly by all Assistant Secretaries and Center directors for content changes and maintenance of key milestone activities. If any contingency plan activity falls behind schedule, the plan will fall into a tier-one category for review and update on a monthly basis by the executive office of that Program Area.

In the BPCCP, HUD addresses four primary business functions and their sub-functions, and two key processes:

**Primary Business Functions**

- Underwrite and Service Insurance (Single Family, Multifamily, and Title I)
  - Underwrite Insurance
  - Service Insurance
  - Terminate Insurance
  - Manage Property;
- Administer Grants and Subsidies
  - Provide Rental Assistance, and Operating Subsidy, to HUD-approved agents
  - Conduct Physical and Financial Assessment of HUD Properties;
  - Provide Grants;
- Enforce Fair Housing and Equal Housing Opportunities
  - Restore and Maintain the Public's Trust

- Conduct Fair Housing Education and Outreach Programs
- Ensure Compliance with HUD Legal Agreements and Statutes
- Undertake Immediate and Necessary Enforcement and Compliance Actions to Rectify Emergency Conditions
- Investigate Program Offices' Complaints and Requests for Intervention
- Initiate Debarment and Suspension Actions and Manage Limited Denial of Participation (LDP) Appeals;
- Provide Secondary Market for Government Insured and Guaranteed Loans
  - Ginnie Mae Mortgage-Backed Securities Program
  - Ginnie Mae Multiclass Securities Program.

### **Key Support Processes**

- Administrative and Management Information Systems;
- Information Technology Infrastructure.

HUD's most critical external dependencies may be classified under two general headings, major infrastructure failures and external business partners. Included in major infrastructure failures are water, electrical, or natural gas-generated power, and data and voice telecommunications. If these infrastructure failures occurred, HUD would be at risk through failures of computer systems, security systems, environmental control, elevators, and telephone and fax line usage. Under the general heading of external business partners, HUD's most critical dependencies are with the Treasury Department, the Federal Reserve, Housing Authorities, grantees, and the banks with which HUD has a direct relationship.

## **VI. Exception Report on Systems.**

**Provide a brief status of work on each mission-critical system which is not year 2000 compliant that is either (1) being replaced and has fallen behind the agency's internal schedule by 2 months or more, or (2) being repaired and has fallen behind the agency's milestones by 2 months or more.**

- a. **If this is the first time this system is reported, include:**
  1. **An explanation of why the effort to fix or replace the system has fallen behind and what is being done to bring the effort back on schedule.**
  2. **The new schedule for replacement or completion of the remaining phases.**
  3. **A description of the funding and other resources being devoted to completing the replacement or fixing the system.**

**RESPONSE:** As of March 31, 1999, all work was completed and no system had fallen behind by two months or more.

- b. **If this system has been previously reported and remains behind schedule include:**
1. **An explanation of why the system remains behind schedule and what actions are being taken to mitigate the situation.**
  2. **A summary of the contingency plan for performing the function supported by the system should the replacement or conversion effort not be completed on time.**

**RESPONSE:** As of March 31, 1999, all work was completed and no system had fallen behind by two months or more.

**VII. Systems scheduled for implementation after March 1999.**

**Please include a list of those mission-critical systems where repair or replacement cannot be implemented by the March 1999 deadline. The list should include:**

- a. **The title of the systems.**
- b. **A brief description of what the system does.**
- c. **The reason that the system cannot be implemented by the deadline.**
- d. **A summary of the contingency plan for performing the function supported by the system should the replacement or conversion effort not be completed on time. Indicate when the contingency plan would be triggered, and provide an assessment of the effect on agency operations should the system fail, including anticipated problems. If you do not yet have a contingency plan, indicate when it will be in place.**

**RESPONSE:** All the Department's systems that were being repaired or that were replacing existing systems were implemented into a compliant production environment by March 31, 1999.

**VIII. Other Management Information.**

- a. **On the first row, report your estimates of costs associated with year 2000 remediation, including both information technology costs<sup>1</sup>, as well as**

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<sup>1</sup> Information Technology costs to be included are described in Section 43 of OMB Circular No. A-11. DOD should report obligational authority requirements for business and weapons systems.

costs associated with non-IT systems. Report totals in millions of dollars.  
(For amounts under \$10 million report to tenths of a million.)

**RESPONSE:**

Fiscal Year	1996	1997	1998	1999	2000	Total
Current Cost Estimates	\$0.7m*	\$6.9m*	\$20.8m*	\$29.8m	\$11.3m	\$69.5m

\*Actual Costs

- b. **If there have been dramatic changes in cost, please explain.**

**RESPONSE:** The Fiscal Year 1997 amount has been adjusted from \$6.2 million to \$6.9 million based upon a thorough audit of the Fiscal Year 1997 costs. The Fiscal Year 1999 base funding amount has been adjusted to \$29.8 million from \$23.2 million; an increase of \$6.6 million. This amount can be broken out into two components. The first is a \$3.1 million adjustment. This increase is to cover Year 2000 outreach to business partners, reporting, software changes due to contingency planning, desktop software assessment and replacement, additional hardware and software to support integrated testing, VRS hardware and software upgrades, and automated code review. The second component is a \$3.1 million HUD IT realignment. HUD's Office of IT realigned funds to appropriate an additional \$3.1 million back to the FY 1999 Year 2000 budget. The total cost estimate for the Department's Year 2000 effort will now be \$69.5 million.

- c. **If there have been significant changes to your agency's schedule, changes in the number of mission-critical systems, changes to the number of systems behind schedule, please explain.**

**RESPONSE:** This is not applicable.

- d. **Are there any concerns with the availability of key personnel?**

**RESPONSE:** No.

- e. **Are there any other problems affecting progress?**

**RESPONSE:** No